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LECTURES.

THE SYMPTOMS AND TREATMENT OF CYSTITIS IN THE MALE.

A CLINICAL LECTURE DELIVERED AT JEFFERSON MEDICAL COLLEGE HOSPITAL, PHILADELPHIA.

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GENTLEMEN, — Six months ago this man was first troubled by an intense sensation of scalding in passing his urine. The pain was felt along the whole course of the urethra, but was most severe at the head of the penis. The urine became thicker and dirtier in appearance each day. In addition to these symptoms there was frequent desire to micturate. The man was in the habit of emptying his bladder every half hour of the day and night. If he drank any malt liquor, or exposed himself to any change of temperature, micturition was still more frequent. Every now and then he cannot retain his water more than three minutes. Sometimes he has trouble in passing his water. The stream is hard to start, and is diminished in size, being occasionally no larger than a small straw in diameter. For the last two months a thin, long string of mucus, not larger than a thread, has issued from the meatus urinarius after micturition. These mucoid strings are from eight to ten inches in length. Lately they have changed into a glutinous, ropy, grayish mass. The man complains of pain upon pressure above the pubes, and also of pain in the region of the anus and perinæum after micturition.

Inspection of the urine, without any reference whatsoever to these most characteristic symptoms, convinces me that the man has a catarrh of the bladder, — a so-called cystorrhœa. The ropy, viscid discharge coming out mixed with the urine, or in a string after micturition, is an undoubted symptom of this condition.

The cause of catarrh of the bladder lies in the presence of some obstacle to the egress of the urine, such as one or more strictures; an enlarged prostate gland; a calculus; hypertrophy or sacculation of the

bladder; carcinomatous or sarcomatous tumor; and paralysis of the bladder, this last occurring as a result of fracture or dislocation of the vertebræ, or being dependent upon pneumonia, meningitis, or myelitis.

The symptoms of cystorrhœa are an increasing discharge of mucopurulent matter, difficulty in micturition, pain in associate parts, and general breaking down of health. The secretion of cystitis is easy to recognize, rendering the diagnosis plain if a specimen of the urine can be obtained. There is usually in such urine a very copious sediment. Another point of diagnosis may be reached by watching how and when the discharge of viscid, ropy, fœtid, and ammoniacal fluid comes away from the bladder, not at all times, but only when the bladder is emptied. The total amount of this discharge in the course of the twenty-four hours varies. Early in the disease there may not be more than one fluid drachm of it in a day, whereas later in the progress of the attack one half of the whole quantity of fluid passed may be this muco-purulent matter. In one case which came under my notice, as much as sixteen pounds or pints of it were expelled in thirty-two hours.

This discharge is not mucus, but pus, — pus acted on by ammonia, which destroys all the pus corpuscles. This ammoniacal pus will, as we have heard from this man, sometimes string out in a mass at the close of micturition. If we examine the supernatant fluid of this discharge, it will be found to give the reaction of albumen, and to contain the crystals of the triple ammonio-magnesian phosphates.

The bladder of a patient with cystitis is never entirely empty. The urea which remains behind decomposes into the carbonate of ammonium, and this intensifies the inflammation. The character of the urine is but very little changed at first, but in later stages, as I have just said, it becomes turbid, muddy, and decomposed, and contains pus and epithelial cells, the triple phosphatic crystals, bacteria, and vibriones. This being so, the first indication, of course, is to keep the bladder clean, and to change the character of the urine.

As regards the quantity of pus passed, there is not very much in this case, not more than one eighth of the total quantity of urine, — calculating with Professor Tyson, of the University of Pennsylvania, that the average daily secretion of urine is fifty ounces. Of course this daily total varies widely according to the state of the weather, etc., etc. In warm weather a large part of it passes off by the skin; in cold weather, as there is little or no diaphoresis, the diuresis is increased in amount. So, too, with regard to the use of certain articles of food. Coffee is a powerful diuretic. This man passes six and one fourth ounces of pus in twenty-four hours. This naturally causes a considerable drain on the system.

The pain in passing water, usually referred to the last two inches of the penis, in reality extends along the whole length of the urethra.

This man tells us that he also has pain in the perinæum and ano-rectal region, and occasionally in the thighs and groins. Most people have a very indefinite idea of the exact location of a pain. Thus a patient with lumbago will often come to you complaining of pain in the kidneys. So, too, a man with functional disorder of the stomach refers his subjective sensations to the heart. In this case pressure over the pubes, after the bladder has been emptied, causes pain. As a general rule pain at the end of the penis denotes inflammation at the neck of the bladder, and pain over the pubic bone denotes inflammation of the whole of the bladder.

This patient does not suffer from any constitutional disturbance. His appetite is good, and his bowels are moved regularly every day. The only thing that he complains of is that his rest is broken by his having to rise so often and urinate during the night. In most cases of cystitis we find the patient utterly broken down and emaciated.

I said that the disease was primarily due to an obstruction to the natural flow of the urine. This obstruction in the young is usually a stricture; in the old it is generally due to paralysis, or more commonly still to enlargement of the prostate gland. There are also, as I have already shown, other morbid conditions of the parts causing obstruction to the flow of the urine.

The intense desire to make water is due to the inflammation of the mucous membrane of the bladder, which may become so swollen and hypertrophied that the organ will not hold more than an ounce and a half of urine. If the bladder of a patient who has died in the early stages of cystitis be opened, its epithelium will be found to be hypertrophied, and to have become the seat of inflammatory deposits. During the course of the disease the bladder undergoes certain changes, — just such changes as would occur in any muscle if it were exercised more than its fellows. The blood would tend to it, and it would become hypertrophied and immensely developed. So in stenosis of the valves of the heart causing enlargement of its muscle. The tendency of the blood to the bladder causes an unusual development of its muscular walls in particular. In some fatal cases of cystitis brought on by stricture I have found the walls of the bladder fully three quarters of an inch in thickness. Of course, *pari passu* with this concentric hypertrophy the cavity of the bladder diminishes in size. In eccentric hypertrophy of the walls of the bladder, the cavity, on the other hand, increases in size. This man, no doubt, has concentric hypertrophy joined with increased frequency of micturition, spasm, and tenesmus. He may have enlargement of the involuntary, internal, columniform fibres of the bladder. Where these muscles are enlarged there is a sort of hydraulic pressure exerted, which drives the mucous membrane out between the columniform fibres, thus forming a number of small

cysts, hernial protrusions from the bladder, as it were, which contain urine. Sometimes there are as many as thirty or forty of these cysts, which may contain uric acid calculi. Indeed, one of these cysts may be as large as the bladder itself. Here is a specimen taken from an old man who died with enlarged prostate, in which you can see the cysts which have formed between the columniform fibres. Here is a specimen of eccentric hypertrophy, in which the size of the bladder is enormously increased.

This man is forty-five years of age, and probably has no enlargement of the prostate, for this condition does not usually occur until after the fifty-fifth year. After that age one person in every thirty shows signs of that condition. In diagnosing enlargement of the prostate by means of an instrument, a peculiar form of bougie is necessary in order to get past the obstruction. In very many cases the presence of an enlarged prostate may be determined by means of a finger in the rectum. In health the prostatic gland is about the size of a horse-chestnut.

This patient tells me that he had gonorrhœa as many as a dozen times when he was young. This history illustrates a very peculiar fact, namely, the *gonorrhœal diathesis*. One man has an attack of gonorrhœa every time that he cohabits with a certain infected woman; another man has connection with her with entire impunity,—the simple fact being that one man has the gonorrhœal diathesis, and the other has not. The last attack which our patient had was fifteen years ago. Upon questioning him closely with regard to that period he tells me that, very often he woke up in the morning and found that the lips of the *meatus urinarius* had stuck together. Moreover, he affirms that since that last attack he has noticed a very decided difference in the size of the column of urine projected, and can only get a number 13 bougie into the urethra. From the size of the meatus it should certainly admit a number 30. Furthermore, the man says that he cannot project the stream properly. He always has to *milk* the last few drops away, as it were. This is due to the loss of function on the part of the urethral muscles. Sometimes, he says, a little streak of blood may be seen in the urine.

Upon introducing a bulbous bougie into the urethra I meet with the first obstruction about three quarters of an inch beyond the meatus. Another I find an inch and a half within the meatus. There is great sensitiveness of the urethra. Far back in its calibre I strike a tight stricture which I cannot get through. In this case the cystitis is very plainly dependent upon strictures of the urethra. I do not care to examine the man any further at present, for I might give him an attack of urethral fever. He says that he was discharged from the army on account of a disease of the bladder, — polyuria he thinks the surgeon said. Later, a New York doctor told him that there was a considerable quantity of albumen in his urine.

In his present condition it is impossible to determine whether or not the man has disease of the kidneys. The albumen in his urine may be due to kidney trouble, might be imagined to show the presence of Bright's disease in a chronic form, and yet it may be simply a product of the inflamed condition of the bladder.

In undertaking the care of a case of stricture one's treatment must of course be modified by the condition of the urinary tract. This, then, brings us to a consideration of the treatment of cystorrhœa. The first indication, of course, is to remove the exciting cause. I shall therefore enlarge the stricture by gradual dilatation. I shall try at some future occasion to wash his bladder out thoroughly, and to get a dozen drops of urine uncontaminated by the vesical discharge. If this urine contains albumen we shall know at once that the kidneys are diseased. If the kidneys are healthy the case can be cured, I think.

The first indication in treatment, as I tell you, is to remove the exciting cause. The urethra is very sensitive. While this is the case it will be hard to cure. We must try to keep down the inflammation. If there be acute pain and spasm, blood must be taken from the perinæum by means of leeches. The patient must be kept in bed, and hot fomentations applied over the pubes. At the same time he should take demulcent drinks, with a little hyoscyamus, — one drachm of hyoscyamus to each glass of the drink. If the pain is violent, morphia must be given by the mouth or rectum. The following prescription is a good one: —

R Pulv. opii	grs. xii.
Camphoræ	grs. xxx.
Ex. belladon.	grs. iij.
Cacno	q. s.

M. et in suppos. No. vi. divide.

S. One each night before retiring.

The diet should be bland and unstimulating.

After the symptoms have abated somewhat, balsam of copaiva should be given three times in the course of the twenty-four hours in capsule, or rubbed up in an emulsion. To this opium may be added, to prevent flatulence and griping. In some cases turpentine in capsule may do good. Other remedies are buchu, decoction of trailing arbutus, or uva ursi with hops, highly recommended by Sir Henry Thompson, — uva ursi f3iss., lupulinæ ʒi., aquæ Oij. This mixture should be allowed to simmer for two hours; then enough water poured in to bring the quantity of the mixture up to two quarts; then two grains of morphia and two drachms of the bicarbonate of sodium added. The dose of this mixture is a wineglassful.

In some cases benzoic acid will be found very useful. The dose, beginning with five grains, should be gradually pushed up to thirty

grains, and finally as much as one drachm may be taken thrice daily. Paregoric has this acid as one of its constituents. Benzoic acid has both a soothing and a chemical action upon the parts. This latter action consists in its influence upon the carbonate of ammonium, which it neutralizes, and with which it forms a soluble compound, and so prevents the formation of the crystals of triple phosphate.

A prescription which I have often used, and from which I have derived the most excellent results, is the following:—

℞ Copaibæ balsami	3iv.
Acid. benzoici	Div.
Gummi arabici	3ij.
Sacchari	3ij.
Gaultheriæ olei	gtt. xx.
Aquæ camphoræ	q. s. ad f ʒ viij. M.

S. A tablespoonful every five hours.

So much for the general treatment.

The local treatment of cystitis is the most important. Cystitis can never be cured so long as a stricture of the urethra remains. Our first aim, consequently, in all cases must be to remove the stricture.

As regards the treatment of the urine, it must be borne in mind that the ammonia in the urine keeps the bladder in a constant state of irritation. The first thing to be done, therefore, after dilating the stricture enough to get an instrument past it, is to wash out the bladder. The best way, perhaps, of doing this is to procure a gum-elastic bag holding about four ounces, and to have a basin of water at 98° F. ready. Then, after drawing the urine with a flexible catheter whose end is smooth, allow the catheter to remain *in situ*, and the bladder may be washed out by simply connecting the mouth of the bag with the catheter. The warm water thus injected should be retained as long as possible, and then drawn off, and the operation repeated. If you do not happen to have this bag and a catheter on hand, get a bit of rubber tubing and a funnel; then pour the warm water into the funnel, and after it has come out through the tubing replace the funnel and repeat the operation until the water comes out clear.

If the urine is fetid, one grain of the permanganate of potassium may be added to each ounce of warm water; or you may add a small part of carbolic acid. After the water has come out clear, if it is desired to make an impression upon the mucous membrane of the bladder, a solution of borax (fifteen grains to the fluid ounce of water) may be injected; or, still better, a twenty-grain solution of the nitrate of silver. If this solution does not cause too much smarting it may be allowed to remain ten seconds.

The patient should rest in bed during this treatment, and be placed upon a very bland diet. I forgot to tell you that after the warm-water injections have come away, if there be pain, a little morphia may be

thrown into the bladder and allowed to remain there ; or if this does not afford relief a hypodermic injection may be given.

In some desperate cases you may have to perform cystotomy, or colocolostomy, in order to bring about a free discharge of fluid from the bladder.

Always caution a patient with cystitis that he must not ride in wagons over rough stones. Indeed, it will be better for him not to ride at all. He must avoid stimulus, and must wear flannel next to his skin. Fish and oysters are good for him, but he should not partake of any greasy food. The bowels must be kept open by cold-water injections or saline cathartics.

A CASE OF HYDROPHOBIA: WITH REMARKS ON THE PATHOLOGICAL PHYSIOLOGY OF THE DISEASE.¹

BY T. B. CURTIS, M. D.

HAVING thus passed in review some of the phenomena of respiratory inhibition in health and disease, let us now carefully consider the manifestations observable in cases of hydrophobia.

The disease is chiefly characterized by certain paroxysms commonly alluded to as "convulsions" or "spasms," and erroneously supposed to bear a more or less close resemblance to the spasms of tetanus. The first symptom to attract particular attention, in most cases, is an inability to swallow. The difficulty at first ensues upon attempts to drink cold water, but before long the patient finds it impossible to swallow warm fluids, solids, or even his saliva. At the same time there is not necessarily any difficulty in executing the movements of deglutition. Our patient was very positive that he could do so, and demonstrated the fact by going through the motions of swallowing before his attendants. The inability to drink is due to the fact that the access of liquids or solids to the fauces at once excites a violent and distressing paroxysm of apnœa. Of all the various occasional causes to which the paroxysms are due, this is the one which operates earliest and most powerfully. There is no dread of water, but a dread of apnœa, — an extreme apprehension of the agonizing paroxysms found by experience to recur on every renewed attempt to drink.

The paroxysms — presenting the same features, however originated — result from a variety of occasional causes, which it will be sufficient to enumerate as follows: (1.) Attempts to drink (hydrophobia) or to swallow food or saliva. (2.) Penetration of saliva into the fauces, whence the ceaseless spitting, deglutition being impossible. (3.) Currents of air, caused by draughts, wind, and fanning (aerophobia). (4.) Cold or wet applications to the surface of the lips, face, extremities, or

¹ Concluded from page 590.

body. (5.) Other peripheral irritations, such as the administration of an enema. (6.) Luminous appearances and glistening objects, including water, mirrors, lights, etc. (7.) Sounds, as of doors opening, of people walking and talking. (8.) Mental impressions, giving rise to alarming or depressing emotions (pantophobia). (9.) Attempts to draw a full breath.¹

Noting, as we pass, the similarity of these provoking agencies to those concerned in the causation of the normal phenomena of respiratory inhibition in healthy subjects, let us now consider the characteristic features of the hydrophobic paroxysms with a view to determining, if possible, their nature and the mechanism of their production.

The paroxysms, when existing in their least marked degree, — as when excited in the outset of a case by some trifling cause, such as carrying a spoonful of water to the lips, or dipping the tip of a finger into a cup of water, — consist in sudden attacks of breathlessness, marked by a rapid succession of quick, shallow, sobbing gasps, during which the inspiratory efforts are of the "costo-superior type." At the same time the patient shudders, and anxiety is depicted on his countenance. The phenomena constituting such a paroxysm have a most striking resemblance, as has often been observed,² to what takes place in a timid, "nervous" person under a cold shower-bath. The resemblance is by no means merely a superficial one. We shall soon find that there is good reason to believe that the phenomena are identical in kind, if not in degree, in the two cases.

When more violent, the attacks — whether caused by attempts to swallow, by fanning, or occurring spontaneously, under the influence of an excitation to be explained presently — take place as follows: the patient, having been for a while in comparative quiet and comfort, resting from his sufferings, suddenly starts violently from his bed, calling

¹ Jaccoud, rehearsing the causes of the paroxysms says: "The respiratory movements themselves may be the exciting agency. Youatt observed this fact in rabid dogs, and Bright recognized it in a patient who, on this account, was careful to avoid making full inspirations." (*Pathologie Interne*, 1877, vol. ii., page 931.)

See also Romberg, *Lehrbuch der Nervenkrankheiten*, Berlin, 1840.

² In a case observed by Dr. S. Cabot at the Massachusetts General Hospital in 1854, the paroxysms were described as follows: "They more resemble the catching of the breath which one experiences in taking a shower-bath, though more violent." (*Massachusetts General Hospital Surgical Records*, vol. ix., page 88.)

Romberg also notes the resemblance. *Loco citato*, page 510.

Jaccoud (*loco citato*, page 931) describes "a sudden arrest of respiration, quite analogous to that which one experiences on plunging into an ice-cold bath, or on receiving a cold shower-bath." Nevertheless, he considers that the paroxysms are spasmodic or hyperkinetic manifestations, and states that "a condition of excessive reflex tension in the foci of the nerves presiding over respiration and deglutition is the essential characteristic feature of rabies in man." His theory, thus enunciated, is exactly the reverse of that advocated in this paper. The two theories differ as completely as a reflex, or excito-motor, differs from an inhibitory, or depresso-motor, phenomenon.

See also Bollinger, *Ziemssen's Cyclopædia*, American translation, vol. iii., page 491.

perhaps for help, and struggles up on to his feet, with an expression of distress, alarm, or terror on his face. In his efforts to get quickly into a suitable posture on the floor, and to free himself from surrounding trammels, the muscular exertion of body and limbs is at times violent and frantic.

Then, in the case of a spontaneous paroxysm, while gasping and struggling for breath, behaving, in short, very much like a drowning man who feels himself going under, the patient, having got himself into a kneeling or crouching posture, sets to work *spitting* in a peculiar way, as described in our reported case. Such an attack lasts perhaps half a minute, after which, having cleared his mouth and fauces of the tenacious spittle, the patient sinks back exhausted, to rest until his next seizure.

These spontaneous paroxysms, recurring with a certain degree of regularity, more or less frequently, seem to be caused by the gradual accumulation of the saliva, which the patient cannot swallow nor yet get rid of without great and fatiguing exertion, on account of its viscid character. When the saliva is sufficiently abundant to trickle into the pharynx, or in any way to be noticed by the patient, a paroxysm is suddenly originated. At first this result is probably due to the mechanical irritation of the fauces; but, later, the mental apprehension aroused by the prospect of an impending paroxysm seems to be the chief disturbing agency. The patient soon learns to associate his sufferings with their determining conditions, and, in consequence of his anticipation of the expected result, a paroxysm is begotten by the fear of a paroxysm.

In the phenomena observed in this case, as also in two other cases which I have seen, there was, properly speaking, *no evidence of spasm or convulsions*,¹ — unless a drowning man, unable to swim and thrashing about in the water, or a man clutched by the throat and struggling frantically for life, can be said to have convulsions. Great muscular exertion there is certainly, but it is of a somewhat rational and volitional kind. At the same time the breathing is short, quick, labored, thoracic, and conspicuously of the costo-superior type, the supplementary and volitional inspiratory forces being brought vigorously into play.²

¹ Dr. S. Cabot, who in the course of his extensive experience has seen some seven or eight cases of hydrophobia, testifies unhesitatingly to the entire absence of true spasms and convulsions in all of them.

² In paralysis of the diaphragm, as described by Duchenne, "the respiratory movements are usually more frequent than in health; the respiration does not, however, appear to be much embarrassed so long as the patient keeps still. . . . But if he makes any exertion to walk or to talk, if he undergoes any excitement, his respiration quickens; the trapezius, sterno-mastoid, serrati, pectoralis major, and latissimus dorsi muscles contract; the face reddens; the patient is breathless; he is obliged, if walking, to sit down; if talking, he must keep taking breath to finish his sentence," etc. (*Electrisation localisée*, 1872, page 908.)

Parrot (*Archives de Physiologie*, etc., 1871, page 240) is of the opinion that an unfailling

The appearances all suggest the idea of violent efforts to supplement the sudden failure of respiration, together with a frantic struggle to get free from some suffocating agency.

The patient's sensations were described by himself as follows:—

Q. Why cannot you drink? A. Because it takes my breath away.¹

Q. Why do you start so when you are fanned? A. Because I cannot bear the wind.

Q. What does it feel like? A. As it would if you had a pailful of cold water thrown in your face.

In the intervals between the paroxysms, there are evidences of important disturbances, both physical and mental. The patient sighs frequently, and at times catches his breath with a sort of gasp or sob; he complains of suffering constantly from various distressing sensations, such as a feeling of præcordial oppression, of breathlessness, and of respiratory anxiety, together with a constant craving for more air.

The psychical symptoms—sometimes preceding the advent of the paroxysms (*stadium melancholicum*), and always more or less marked during the acme of the disease—consist in emotional disturbances (depression and excitement), with impairment of the restraining powers exerted by the higher cerebral functions of reason and volition. These disturbances take the forms of mental depression, anxiety, fear, suspicion of attendants, together with great restlessness and excitability, culminating in a state of delirium or even of mania. Marked sexual excitement (satyriasis, nymphomania) has occasionally been observed.² In the case of a female whom I saw at the Hotel Dieu in 1869, when interne under Voillemier, nymphomania was present in a most remarkable and scandalous degree, ceasing only with life.

Finally, rapidly progressing general exhaustion occurs, due largely to privation of food and drink and to the almost complete lack of sleep, accompanied by ceaseless muscular exertion. Death takes place either quietly, from gradual cessation of respiration, or during a final paroxysm.

Having passed in review the determining causes of the hydrophobic paroxysms and the appearances which they present, I will now venture sign of impending death (agony) is to be found in certain symptoms which, he says, are indicative of paralysis of the diaphragm. These are, in the first place, an inspiratory sinking in of the epigastrium and hypochondria, and, in the second place, pronounced *costo-superior inspiratory efforts*. These last, which he says are observed in all cases of diaphragmatic paralysis, were plainly visible during the paroxysms in the case of my patient. I regret having omitted to observe the respiratory movements of the abdomen in this case, as I might thereby perhaps have been able to verify the correctness of my theory of the paroxysm, by ascertaining whether the violent inspiratory efforts of the patient were accompanied by the epigastric depression described by Parrot. Some other observer will perhaps repair this omission.

¹ See Dr. Sansom's case, *Lancet*, September 7, 1878, page 329: "There seemed to be a 'stop' in his breath when he tried to drink."

² See Jaccoud, *loco citato*, page 932.

to express an opinion as to their nature. Judging, then, by the strong resemblance which they bear to familiar phenomena of respiratory inhibition, as regards both their provoking causes and their characteristic features, subjective as well as objective, I believe the paroxysms to consist in sudden attacks of *paralytic apnœa*, due to temporary, partial or complete, inhibition of the respiratory centre, taking place under the influence of peripheric impressions. The inhibitory stimulus proceeds first from the area of distribution of the superior laryngeal nerve, being originated by attempts to drink and by accumulated saliva; secondly, from the area of the fifth pair, as a result of wetting the lips or face, and of fanning; thirdly, from the nerves of sensation of the trunk and limbs; fourthly, from the nerves of special sense; and, fifthly, from the emotional regions of the hemispheres, a paroxysm being excited by the fear of a paroxysm.

According to this view, the most characteristic phenomena of hydrophobia, the paroxysms, consist simply in greatly exaggerated manifestations of a familiar physiological function, namely, the function of respiratory "arrest" or inhibition, experimentally studied by Rosenthal, Brown-Séquard, Claude Bernard, Burkart, and others.

With regard to the origin or mode of production of the paroxysms of respiratory inhibition two suppositions can be made: either the inhibitory stimuli are increased, or they meet with less power of resistance in the respiratory centre. Let us for a moment consider these two views.

Increased inhibitory stimuli would be due to a sort of hyperæsthesia¹ of all the parts of the peripheral nervous system from which centripetal inhibitory impressions are known to proceed. With the exception, however, of the paroxysms themselves, whose production we are trying to account for, no evidence can be adduced to show that any such condition of hyperæsthesia capable of intensifying the inhibitory impressions exists.

Diminished resistance of the respiratory centre to occasional inhibitory influences seems a much more plausible explanation of the paroxysms. Such a condition of impaired resistance would readily result from the marked diminution of respiratory activity, existing permanently in hydrophobic patients. According to this view the positive stimulation supplied by the respiratory centre being constantly inadequate, occasional negative (inhibitory) stimuli produce exaggerated effects, and therefore *seem intensified*.

This functionally depressed condition of the respiratory centre, en-

¹ Jaccoud attributes the production of paroxysms, under the influence of fanning, the contact of liquids, etc., to a "cutaneous hyperæsthesia" (loci citati, page 931). Bollinger (Ziemssen's Cyclopædia, American translation, vol. iii., page 486) says that "this excessive hyperæsthesia is manifestly the cause of the aerophobia," etc.

tailoring diminished powers of resistance to inhibitory influences, is doubtless due, primarily and principally, to the structural changes taking place in the respiratory centre itself.¹ The impairment of function, resulting from such local alterations, is probably intensified by an additional depressing influence, proceeding from the morbidly active emotional regions of the hemispheres to the medulla.

The following scheme, then, seems in a tolerably satisfactory manner to coördinate and account for the phenomena of hydrophobia:—

The activity of the respiratory centre—being kept in a permanent state of depression, “below par,” so to speak, in consequence of local alterations of structure, and also in consequence of depressing influences proceeding from the diseased emotional regions of the brain—is thereby rendered liable at any moment to become reduced to zero (paroxysm of paralytic apnoea) by slight inhibitory stimuli of peripheral origin; death eventually resulting, during or after a final paroxysm, from entire failure of the inspiratory forces.

The *therapeutical deductions* suggested by this theory of hydrophobia are, I regret to say, chiefly negative, taking the form of counterindications.

The methods of treatment hitherto advocated have generally been based upon the unwarranted but undisputed assumption that the disease was of a convulsive nature, the paroxysms themselves being looked upon as the expressions of an exalted condition of the excito-motor functions of the medulla and spinal cord. To combat the supposed “spasms,” all the amyosthenic and depresso-motor agents have successively been tried, curare being the drug for which the most enthusiastic and most recent claims of efficacy have been raised.² If, however, the theory now advocated is accepted, if the disease is characterized by *deficient* excito-motor activity, and if the paroxysms, instead of being spasmodic, are in reality paralytic manifestations, then all depresso-motor medications must be looked upon as distinctly counterindicated. Curare, in particular, which exerts an almost exclusively amyosthenic action,—by virtue of its power to prevent motor stimuli from reaching the muscular fibres,—would seem to be the very last drug to be recommended, since it kills by producing paralysis of the diaphragm. Full doses of curare would have the effect of rendering the patient powerless to struggle; in this way the outward manifestations of his sufferings would be more or less repressed. The tendency to paralytic apnoea,

¹ Dr. W. R. Gowers, having made microscopic examinations of the brain and cord in four cases of hydrophobia, says: “The region in which the lesions were most intense corresponds to that in which experimental physiology has located the “respiratory centre of the medulla.” (Pathological Transactions, 1877.)

The results of Dr. Gowers’ investigations have been confirmed by Dr. R. H. Fitz. (Boston Medical and Surgical Journal, August 29, 1878.)

² For a statement of the theory upon which the treatment of hydrophobia by curare is based, see Offenburg’s case in the Medical Times and Gazette, October 6, 1877, page 396.

however, could only be intensified, and the fatal termination would thereby be hastened.

In the case of my patient, notwithstanding theoretical objections to the medication, and doubts as to the authenticity of the cases¹ of hydrophobia reported to have been so cured, it was decided, in deference to the favorable evidence² lately adduced, to try the treatment by curare. In so desperate a disease any treatment which seems to hold out the slightest promise of efficacy should be given a fair trial. The result in this case, however, was as unsatisfactory as possible. Several other cases are, moreover, on record, in which the same treatment proved unavailing.³ Such being the case, I believe that, unless more convincing reasons for its use are brought forward, curare should be abandoned in the treatment of hydrophobia.⁴

Until some means of treatment shall have been discovered by which the progress of the pathogenetic processes of hydrophobia can be arrested, the resources of therapeutics must be limited to the treatment of the symptoms of the disease. The objects to be aimed at are the relief of the patient's sufferings, the prevention or mitigation of the paroxysms, the administration of food and drink, and, finally, as easy and painless a death as may be procured without the fatal termination being actually hastened by our therapeutical measures.

The frequency and intensity of the paroxysms might be diminished in two ways, namely, by preventing the reception or the transmission of peripheral inhibitory stimuli, or by increasing the activity of the respiratory centre, so as to diminish the liability to total failure under slight inhibitory influences.

With a view to suppressing the peripheral inhibitory impressions narcotics and anæsthetics have been largely tried.

Chloroformic anæsthesia, if it could be established and maintained, would perhaps cause the paroxysms to be more or less suspended. This result would, however, be difficult if not impossible to obtain. Chloro-

¹ In Dr. Watson's case (*American Journal of the Medical Sciences*, July, 1876) it is not only the recovery of the patient after three small doses of curare, amounting in all to about one third of a grain, which makes one distrust the diagnosis. The report of the case shows that the patient was throughout able to swallow liquids and solids in abundance, and that he was not apparently affected by bathing his hands and face in water.

² *Boston Medical and Surgical Journal*, March 7, 1878, page 315; also *Medical Times and Gazette*, October 6, 1877, page 396, and December 1, 1877.

³ *Boston Medical and Surgical Journal*, March 7, 1878, page 315.

⁴ Only on one supposition could curare be expected to have any but an unfavorable effect in hydrophobia. If the paralyzing influence which this drug exerts upon the cardiac inhibitory fibres of the vagus is shared by the respiratory inhibitory fibres, and if this favorable effect is not wholly overbalanced by the harmful amyosthenic action of the drug, then curare might be of service by shutting off, to a certain extent, one of the chief sources of inhibitory impressions. The liability to the production of paroxysms might thus be somewhat diminished. According to Paul Bert, however, the vagi preserve their inhibitory power over the cardiac function in curarized mammifera, impairment of the inhibitory function of the vagi having been observed only in frogs.

form inhalation, as we have seen, occasionally kills apparently healthy subjects by respiratory inhibition, in consequence of its irritating action upon the laryngeal mucous membrane, and would therefore be unlikely to be well tolerated in hydrophobia.¹ Moreover, when chloroformic anæsthesia is fully established, a very depressing influence is exerted upon the respiratory and cardiac centres.

Ether is liable to somewhat the same objections, though in a very much less marked degree, and probably offers the nearest approach to a means of euthanasia, without exasperation of the most dangerous symptoms, and without undue risk of precipitating the probably inevitable fatal termination by paralytic apnœa.

Chloral hydrate administered by enema or by intravenous injection, although possessing no curative virtue, seems to have been of service in some cases by inducing sleep, and by diminishing somewhat the frequency and violence of the paroxysms.² Such a result of its narcotic properties must of course be highly welcome, provided that the drug, while mitigating the sufferings of the patient, — and thereby masking the progress of the disease, — does not at the same time impair his enfeebled powers, and hasten the fatal termination. Vulpian,³ having lately investigated the action of anæsthetics (chloroform, ether, and chloral) upon the respiratory centre, found that in chloralized dogs a very small additional dose of the drug was apt to produce death by apnœa, the respiratory centre being paralyzed. He also found that in dogs anæsthetized by chloral the respiratory movements, when arrested by irritation of the central end of the cut vagi, do not spontaneously become reëstablished, as they promptly do in animals not under the influence of an anæsthetic. His experiments show that the narcotic action of chloral is extended to the respiratory centre, and that under its influence the inhibitory arrest of breathing is apt to be irreparable. These considerations, applicable to all the narcotic medications when pushed to the full production of anæsthesia, should be taken carefully into account in any attempt to determine the usefulness of drugs in hydrophobia.

Such seems to be the limited extent to which narcotics and anæsthet-

¹ In Sansom's case (*Lancet*, September 7, 1878, page 329) "it was determined that the ulnar nerve should be divided, and the scar on the hand removed; and further, that the administration of chloroform should be attempted. Immediately on its application, however, the patient ceased breathing, and turned to a cadaverous tint, with a feeble, fluttering, intermittent pulse. . . . Artificial respiration did no good. After about a minute a few gasping respirations occurred. Afterwards breathing was more regular, though interrupted with much gasping." In his concluding remarks Dr. Sansom says: "Though chloral was highly beneficial, it was as distinctly proved that the inhalation of chloroform was dangerous."

² See Sansom, *loco citato*; also Prévost and Hanot, *Gazette hebdomadaire*, 1876, page 364.

³ *Comptes rendus de l'Académie des Sciences*, May 27, 1878; *Revue des Sciences médicales*, vol. xii., page 487.

ics may be expected to be of benefit. If, on the other hand, it were possible to increase the activity of the respiratory centre, which is in a condition of such marked depression in hydrophobia, the tendency to paroxysmal respiratory inhibition would probably be counteracted. *Beladonna* or *atropia*, in moderate doses, is known to act as a respiratory stimulant, whence, perhaps, its usefulness in some forms of asthma (Trousseau), and in opium poisoning, where death by paralytic apnoea is impending. It has been asserted that *atropia* had the property of paralyzing the laryngeal fibres of the *vagus* which inhibit respiration, but *Keuschel* seems to have shown that such is not the case, so that the increased respiratory activity caused by this drug is now attributed to its direct stimulating action upon the respiratory centre.¹ When very large doses are given this centre is paralyzed. These considerations would lead us to expect some slight benefit in hydrophobia from small or moderate doses of *atropia*.

Opium, in small or moderate doses, activates the respiratory function, thus exerting a property which is often utilized in the treatment of disease.² In large or toxic doses, on the contrary, it has a depressing effect upon the respiratory centre, and kills by producing paralytic apnoea. In hydrophobia, as was observed by *Magendie* and others, very large doses of the drug seem to be tolerated, but whether their effect as regards the respiratory function is favorable or the reverse is difficult to determine. In the treatment of hydrophobia I think caution should be exercised in the use of all drugs which have a tendency to produce depression of the respiratory centre, and, for this reason, opium should be given, I think, only in moderate doses, such as are known to have a eupnoic effect.

In conclusion of these remarks, which are intended to be only suggestive, and have no pretension to an exhaustive character, I would call attention to an important point deserving consideration in connection with the administration of powerful drugs in large doses to hydrophobic patients. In all diseased conditions in which the secretion of urine is defective, accumulation of drugs within the system is apt to occur, in consequence of the fact that their elimination is prevented or interfered with. This is known to be not unfrequently the case in *Bright's disease*.³ In hydrophobia, where a condition approximating anuria exists, it seems not unlikely that drugs may produce cumulative effects to an unexpectedly injurious extent. This consideration should, I think, be borne in mind, especially in connection with the use of agents whose toxic effects are likely to be unfavorable.

¹ Von Boeck, *Ziemssen's Cyclopædia*, American translation, vol. xvii., page 675.

² Huchard, in a paper on the use of opium in heart disease, calls attention to the excellent effects of morphia, administered subcutaneously, in all forms of dyspnoea, especially in such as occur in paroxysms, as in asthma, and in those forms which are due to a nervous disturbance. (*Journal de Thérapeutique*, Nos. 1 and 2, 1877.)

³ See Chauvet on the danger of powerful drugs in renal disease, Paris, 1877.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MARCH 10, 1877. *Tumor of Uterus.*—DR. HALL CURTIS read the case.

M. L., domestic, single, aged fifty, entered the City Hospital on February 26, 1877. She had generally enjoyed good health, but for the past six months she had been delicate, and had been obliged to give up work three months before. She had lost flesh and appetite, and complained of great weakness, of pains in various parts of the body, especially the back, and swelling of abdomen. During the past eleven years the catamenia had been irregular, at times absent for several months. For seven months there had been no sign of menstruation, but there had been a marked leucorrhœa. Micturition was very frequent, the patient having to empty the bladder three times during the night, always with difficulty.

The circumference of the abdomen at the umbilicus was thirty-eight inches, the right side being much fuller than the left. Rising from the middle of the pubes to umbilicus, filling the right side of the abdomen, and dipping again into the pelvis, was a hard, irregularly rounded mass, neither tender nor movable, and dull on percussion. The vagina was small, the anterior wall firm and infiltrated, the cervix far back towards the sacrum and enlarged. The anterior lip was smooth and hypertrophied, the posterior studded with firm and prominent cauliflower-like masses. One was separate from the rest, the size of the first joint of the little finger, polypoid in feel.

The os admitted the tip of the little finger. The urethra was so compressed that a catheter could be passed only with great difficulty.

March 2d she was examined under ether. A uterine sound, very much curved, passed anteriorly and to the right five and one half inches into the abdominal tumor; the uterus was immovable. The sound in its course passed frequent obstructions, as if the interior of the uterus was irregular from projecting growths in its wall. Most of the growth on the cervix was removed with scissors and spoon, with considerable bleeding.

The next two days she complained of pain, but was fairly comfortable. The second night the temperature rose to 103°.

March 5th. Tympanites; tenderness over site of tumor; temperature 102°.

March 6th. Delirious during night; face pinched in expression; knees constantly flexed; vomiting; skin cold; pulse weak; abdomen distended; left side especially full, and very tender; œdema of feet. A. M. Temperature 100.4°; pulse 100. P. M. Temperature 100.5°.

March 7th. Temperature 99° A. M. The patient died at nine o'clock, A. M.

DR. W. P. BOLLES examined the parts removed from cervix, and reported that the specimen consisted of a few bits of adenoid growth, made up of follicles and cavities (as they appeared), covered with cylindrical epithelium and arising from a fibrous base which was infiltrated with granulation (inflammatory) cells, and traversed by large injected blood-vessels. The mucous membrane over either a fibroma or a malignant tissue may take on this growth,

and it is therefore impossible from this alone to say positively which lies above. So far up as he could see it, however, the tissue was fibrous only.

DR. SINCLAIR remarked that the microscopic appearances were the same as he had found in a mucous polypus from the rectum of a child two or three years old, following dysenteric symptoms. The tumor had been removed by ligature.

Phlegmasia Dolens terminating fatally, probably from Pyæmia. — DR. MINOT read the case.

Mrs. W. was confined for the first time November 6, 1874. She was then twenty-seven years old, of nervous temperament, and rather stout. The labor was tedious, was completed by forceps, and followed by profuse hæmorrhage. Convalescence was slow, and the supply of milk scanty. The pulse was rapid for several days, without other inflammatory symptoms. November 13, 1875, Mrs. W. was confined a second time. The labor was natural, but was also followed by copious hæmorrhage, from which, however, the patient soon rallied. There was little or no milk, and the child, which was brought up by hand, died during the following summer of cholera infantum. The third labor occurred December 27, 1876. It was natural, but like the preceding ones was followed by profuse hæmorrhage. As the pains had been strong, and the child was expelled without assistance, I was surprised that the placenta did not speedily follow. Traction on the cord producing no effect, I passed my hand into the uterus, and found the after-birth firmly adherent to the walls of the womb. It was necessary to remove it piecemeal, but it was supposed that the whole was got away. The hæmorrhage then ceased, and did not recur. The pulse could not be felt at the wrist for about an hour; the surface was cold, the face was covered with sweat, and the respiration was rapid. Ergot was given immediately by the mouth, followed by a teaspoonful of laudanum and some warm gruel, and brandy was given by the rectum. The womb contracted well, but there were severe after-pains, for which morphia was injected into the arm. No milk was ever secreted. For several days the pulse was rapid (120 in the minute), without other inflammatory symptoms, as was the case after the first labor. In about a week the lochia became somewhat offensive, for which vaginal injections of a solution of carbolic acid were employed. January 1st (fifth day) the pulse was about 100; abdomen soft, and a little tender over the womb, which was felt just above the left ramus of the pubes; no tympanites; no vomiting; no chill; no delirium; bowels in good order; appetite fair. Mrs. W. was, however, depressed and despondent, which was ascribed in part to domestic circumstances, and also to her grief for the loss of her second child.

January 4th and 5th the patient complained of uneasiness in the back, and of pains in the abdomen resembling after-pains. January 6th she had pain in the left groin extending down the thigh and leg, with numbness and loss of power of the foot. There was tenderness along the femoral vessels and in the groin. The limb felt hotter than the right to the touch, and it could not be moved without pain. There was no chill, vomiting, or delirium. The appetite was good, and the bowels were regular. Pulse 120, temperature 102°. The symptoms of phlegmasia dolens gradually developed, but about January 10th

the patient became more comfortable; the pulse was 108, the limb less swelled and less painful, and she continued to improve until January 14th, when she had a rigor, lasting about twenty minutes; this recurred at irregular intervals, but never oftener than once in twenty-four hours; until January 21st. On January 15th Mrs. W., in consequence of some unfounded apprehension, had a violent hysterical paroxysm, and afterwards was frequently much excited. January 20th the pain and swelling began in the right limb; there was a good deal of delirium; the face was very pale; the pulse small and rapid; the respiration frequent; and the general condition very discouraging. The patient, however, continued to take her nourishment well, and the bowels and urine were free. The whole limb swelled enormously. Vesications formed upon the thigh, and burst, discharging large quantities of serum. The foot, ankle, and calf were mottled with dark purple spots. During January 25th the pulse was 120, and very feeble; temperature 101° . There was wandering of the mind, and the face was covered with sweat. For the first time the patient passed no urine all day, and at nine P. M. about a pint was drawn by the catheter, of which she seemed unconscious. She died at ten P. M.

The treatment consisted mainly in the administration of quinine and iron, with morphia in sufficient doses to relieve the pain and procure sleep, and fomentations to the limbs. The bowels were easily regulated, and the urine was free. The diet was nourishing, consisting chiefly of milk, with animal broths, and as much brandy as the patient would take. She was allowed water to drink as she desired. As she had once had an attack of intermittent fever, the dose of quinine was increased after the appearance of the rigors to four grains three times daily; and this proving of no avail, twelve grains were given in one dose on the mornings of January 22d and of January 23d, and six grains on the morning of January 24th. There were no rigors after January 21st. The patient felt no inconvenience from the medicine.

As there was no autopsy in this case the exact diagnosis was uncertain. The disease, as it began in the left leg, was evidently simple phlegmasia dolens. The chills and mental excitement which preceded the attack in the right leg indicate a more general affection. The blood was probably diseased, and the patient died of pyæmia or of septicæmia. As to the source of the blood infection, we may trace it to a decomposed thrombus in the left femoral vein, or to a fragment of placenta left in the womb. I am inclined to believe that the cause of death was pyæmia, on account of the repeated chills. It is true that there was no evidence of the existence of pus either in the joints or in the lungs, but probably numerous small deposits would have been found in the large organs had a post mortem been made.

Pus in Ovarian Fluid.—DR. CHADWICK cited the case of a patient who had died from spontaneous perforation of an ovarian cyst, in the service of Dr. R. T. Edes at the City Hospital. The fluid obtained with the trocar on several occasions during the preceding six months had contained much pus, although there had been no evidence of inflammation of the cyst wall shown in the pulse, temperature, or sensations of the patient. At the autopsy the principal cyst was found to have been extensively ulcerated on its inner surface. Dr. Chadwick pointed out that the pus might possibly, under such circumstances,

be regarded as indicative of ulceration, and hence of the importance of immediate extirpation to prevent a fatal result by perforation, as occurred in this instance. The case is reported more fully in the Clinical Report of the City Hospital, Volume II.

Dr. Chadwick, in answer to a question concerning the diagnosis of ovarian disease by the fluid drawn by tapping, spoke of certain indications upon which more or less reliance had from time to time been placed, as for example Drysdale's corpuscles, the paralbumen of Spiegelberg, cholesterine, etc. If fibrinous coagulation takes place soon after tapping, the fluid is more apt to be ascitic. Thornton's groups of cells, which are not the same as Drysdale's corpuscles, have been held to be characteristic, but are not considered to be so at present.

Dr. ARNOLD mentioned a case of ovarian tumor operated upon last fall by Dr. George W. Gay. The tumor had been previously tapped, and a purulent fluid withdrawn which contained one or two silky hairs. When the tumor was ultimately removed, hair and ulceration were present over a limited surface at the base.

A member questioned whether a condition of ulceration, as found in some cases of ovariectomy, had any influence upon the results of the operation, or was to be considered evidence of constitutional disturbance.

Dr. SINCLAIR said he thought it indicated a good deal of vitality in the ovarian sac that cicatrization should sometimes be found in the place of these ulcerations.

Laceration of the Perinæum.—Dr. RICHARDSON stated that among the theses recently presented for graduation at the Harvard Medical School was one by Dr. J. E. Garland, recently house physician at the Boston Lying-In Hospital. With the permission of the writer he desired to call the attention of the members of the society to one or two points which an examination of the hospital records had shown were of importance as bearing more or less directly on the question of the causes of injuries to the perinæum during delivery. Of the five hundred cases examined, 60 per cent. were primiparæ and 40 per cent. were multiparæ. In eighty-seven of the cases (about 17 per cent.) the perinæum received some injury. Of the cases in which the perinæum was injured 78 per cent. were primiparæ and 22 per cent. were multiparæ. As 60 per cent. of the cases examined were primiparæ, and 78 per cent. of the injured ones were also primiparæ, it is clear that 18 per cent. more accidents occurred among primiparæ proportionally; or, in other words, of one hundred cases of laceration 68 per cent. would be found to be primiparæ and 32 per cent. multiparæ. Of the severe cases, 90 per cent. were primiparæ. Out of twenty-eight forceps cases lacerations were observed in ten, or in 35.7 per cent., and all of these were primiparæ. As regards the extent of the injury received, it was found that in sixty-four, or nearly 75 per cent. of the cases, there was only a slight tear. In fourteen the laceration did not extend beyond the insertion of the transversalis muscle; while in nine of the cases, the rupture went through the sphincter ani. In no case, however, was the recto-vaginal septum ruptured. Of the ten forceps cases three were torn slightly, five considerably, and two well into the sphincter.

As regards the cause of the laceration, it was found that in forty-six, or over 50 per cent., the time which elapsed after the head reached the inferior strait until the end of the second stage was not longer than half an hour. In twenty-five of these the whole second stage did not exceed thirty minutes. In fifty the second stage did not last over one hour, and, if the ten forceps cases are added, it will be seen that in sixty cases, or 75 per cent., the head was rapidly delivered. In five cases the perinæum was especially rigid. Twice there had been a previous laceration. The fœtus presented by the head in all but one case, that being a footling.

The laceration was caused by the head seventeen times; by the shoulders twenty-one times; by the head and shoulders seven times; by the elbow twice; by the body once; and no mention is made of the cause in thirty-nine of the cases. In at least eight of the cases the hand was beside the face. Forty-six of the children were male and forty-one were female. Where, however, the laceration was extensive, there were found to be twice as many males as females.

In the nine cases of extensive laceration deep sutures were applied at once, with good union in six of them, while in the other three there was good union in the region of the sphincter.

Dr. Richardson said he desired to call the attention of the members to the important part which the rapidity of the labor bears to the amount of injury inflicted, and the necessity, therefore, of preventing, so far as is possible, any sudden stretching of the perinæum. To a great extent this can be avoided by holding the head back during one or two pains, when the perinæum is well stretched, so as to prevent any sudden tear at the last moment. Another point of interest is the fact that a very large number of these lacerations were occasioned by the shoulders after the head had been safely delivered. In a great measure these may be avoided if only the same care is shown in watching the expulsion of the shoulders as is given to the delivery of the head. The sharp point of the shoulder is naturally more apt to injure the perinæum than is the rounded head, and there is therefore all the more necessity for being on our guard during the expulsion of the shoulders. As a matter of fact, too little attention is paid to the shoulders, the accoucheur often considering the danger of a tear over after the head is born.

In the hospital sutures are never taken unless the laceration is extensive, the only treatment of slight ruptures being cleanliness, and occasionally the application of some stimulant to granulations which show a disposition to become indolent.

DR. ABBOT said he had supposed it was generally understood that the shoulders are a frequent cause of rupture of the perinæum.

DR. SINCLAIR remarked that Simpson taught that especial care was necessary with reference to this point in the delivery of the shoulders.

DR. LYMAN said he agreed with Dr. Abbot. He had had that very morning quite a laceration, occasioned by the shoulders, and requiring to be sewed up. The head had come out well enough.

DR. ARNOLD asked Dr. Richardson if he thought the sharp point of the shoulders was the precise cause of the laceration.

DR. RICHARDSON replied that he thought so; that the sharp point of the shoulder was forced against the constricting vaginal muscles, and compelled to break or cut its way through.

DR. ARNOLD said he thought, on the other hand, that it was the greater circumference of the shoulders which occasioned the laceration. Another cause was the condition of the parts, various in different patients. The worst case he had ever had was one in which there was apparently ample room, but the state of the perinæum was such that it tore like wet paper. This was a case of natural birth, not particularly rapid, nor was the child very large. It was the third pregnancy. Dr. Arnold stated that the pubic shoulder comes first, and that there is no sharp prominence, as during the passage the shoulders are driven in in all directions. In one or two instances under his observation both points of the shoulders had passed before the rupture took place.

DR. LYMAN stated that in the immense majority of cases — and he had sewed up a great many — he used neither wire nor catgut, but common silk.

DR. CHADWICK mentioned the fact that in one case of Cæsarean section sutures of catgut had been absorbed within five or six days, and the incision in the uterus had opened.

DR. ARNOLD said that he had gradually abandoned sutures, so great is the discomfort to the patients.

DR. MINOT asked an opinion concerning the practice of nicking the perinæum as a means of avoiding laceration.

DR. CHADWICK stated that cuts he had seen in Vienna appeared, when the perinæum was stretched, nearly two inches long, but were probably shorter.

DR. MINOT said he supposed the object was to cause the tearing, if any, to take a lateral instead of a median direction.

DR. CHADWICK suggested that it was also to allow the perinæum to slip backwards over the head toward the coccyx of the woman.

DR. LYMAN said it was a great mistake to suppose these things healed up when let alone. He was constantly seeing cases in which the perinæum was unhealed, as, for example, one last week, of two years' duration, in which the laceration was severe. Dr. Lyman did not think it of the slightest consequence to tie the knees together. He never failed to put in a stitch if there was anything more than the slight laceration so common in first labors.

DR. CHADWICK said that in the two lying-in wards in Vienna the opposite plans of applying serres-fines in all perineal ruptures not involving the sphincters and of leaving them to nature had been tried simultaneously with equally good results.

Local Congestion vicarious with Menstruation. — DR. MINOT reported the case of a lady, forty-two years of age, always healthy, a widow, but never pregnant, who generally flowed freely at the catamenia. When fatigued, at Philadelphia, the catamenial flow stopped on the third day, and injection of the conjunctiva of one or both eyes occurred, accompanied by pain in the forehead and eyeball. This has subsequently taken place in the latter half of the menstrual period, sometimes one eye, sometimes both eyes being affected and looking externally red. The patient had not been troubled with sick headaches.

Difficult Labor; Instrumental Delivery of a Hydrocephalic Head. — DR. REYNOLDS reported the case, which is reserved for publication. After giving an account of the case, and reserving the diagnosis, Dr. Reynolds asked the society for an expression of opinion.

DR. RICHARDSON inferred from the slipping of the forceps a hydrocephalic head, and remarked that he had first heard of this point in Braun's ward in Vienna. The diagnosis was made out by external palpation. The fluctuating head was clearly felt, and in this connection Dr. Braun made the statement in regard to the slipping of the forceps. The woman was very thin and under chloroform.

DR. SINCLAIR recalled a like case which occurred in the Royal Maternity Hospital at Edinburgh. The legs and arms were small, but the belly was enormous, and this gave the clew to the size of the head. This was delivered after perforation by the scissors. Dr. Sinclair stated that he had seen, with Dr. Damon, an exactly similar case.

Viburnum Prunifolium. — DR. ABBOT spoke of a remedy which he had lately employed with much satisfaction in dysmenorrhœa. It was well known, he said, that a secret remedy, called "Hayden's viburnum compound," had considerable reputation in these cases. The viburnum prunifolium has long been regarded as having a special action upon the uterus. Being unwilling to use the secret remedy, he experimented with a fluid extract of viburnum, manufactured by Burrough Bros., of Baltimore, with very satisfactory results. He had used it in six successive cases within the past two months, with entire relief in every instance. In one case there was not a particle of pain after the first dose. He had given a teaspoonful every second hour until relief was afforded, and it had required from two to six doses. To some patients the taste is not very agreeable, but this can easily be remedied by the addition of some aromatic. He thought it would be well to begin with the dose of two teaspoonfuls in an urgent case, and follow it up by teaspoonful doses every hour until the pain is relieved. [Dr. Abbot's experience subsequent to this meeting confirms thus far his favorable impression of this drug.]

DR. CURTIS added his testimony in four cases, two in single women, one in a married sterile woman, and one in a woman who had borne two children. All got the greatest relief, the last one in particular, in whom he had previously tried everything, including morphia. Two doses gave entire relief. Metcalf's preparation has four times the strength of that of Hayden.

DR. LYMAN reported four cases in which he had tried the remedy; one patient said she was somewhat relieved, one that she was entirely relieved, while the other two were not certain that they had been benefited in any degree. He began the administration one week before the expected flow. The plant from which the extract is made is viburnum prunifolium.

DR. CHADWICK stated that he had made extensive use of the drug, chiefly in spasmodic dysmenorrhœa, and had obtained relief in many cases. It seemed to act as well as, but no better than, valerianate of zinc. In his dispensary it had been administered to fully fifty patients with a large percentage of good results, but not so invariably successful or brilliant as those just announced.

ROOSA ON DISEASES OF THE EAR.¹

In the short space of five years Dr. Roosa's work has reached its fourth edition, and nothing can show better than this fact how well the book was adapted to the needs of the physician. The present is a reproduction of the third edition, with the exception of the nineteenth chapter on diseases of the internal ear, which has been almost entirely rewritten, and it is extremely complimentary to the author's powers of observation that, while he has found so much upon both new and old subjects to add here, there was necessity for changing so few of the opinions which had been expressed in previous editions.

We find the distinction between double hearing and false hearing more carefully drawn than before, and attention carefully directed to the fact that these symptoms are very apt to be associated with disease of the conducting apparatus. In regard to electricity we find no change from the previously expressed opinion that it is of little if any value either for diagnosis or treatment, and nothing new has been added upon this subject. Under injuries some two pages have been added to show that not infrequently hæmorrhages with resulting deafness leave no perceptible trace of cicatrix or deformity, although the deafness remains. Three new cases of primary inflammation of the labyrinth are given, which, although not absolutely conclusive, help confirm the belief in the existence of this disease.

Under concussions are a considerable number of new cases which show that the continual recurrence of a single unpleasant sound probably causes a hyperæmia of the ultimate nerve fibres of the cochlea. Certainly among boiler-makers deafness due to labyrinthine disease, most likely of the cochlea, is very common, and one of the cases given is interesting as showing how effectual the closure of the ear-passages with cotton plugs is in preventing this injury. Many of these boiler-makers presented the well-known phenomenon of hearing better in a noise, and after considering the various theories advanced to explain this curious symptom, Dr. Roosa rejects them all, and confesses himself unable to solve the puzzle, which has been handed down to us from Thomas Willis of the seventeenth century.

The experiments of Dr. Hammond and of Dr. Roosa on the action of quinine upon the ear, now first given in this work, although they have been published elsewhere, justify the supposition that the tinnitus aurium and impairment of hearing produced by this drug are due to congestion of the ultimate fibres of the auditory nerve in the cochlea, and that this congestion may extend to the tympanic cavity.

By far the most interesting and valuable addition is that upon syphilitic cochlitis, first accurately described by Dr. Roosa, and it is pleasant to see that the opinion in previous editions that the prognosis in disease of the labyrinth, occurring in the course of syphilis, is very unfavorable has been now reversed. The clinical aspects of syphilitic affections of the labyrinth are well described, and cases given illustrative both of diagnosis and treatment.

A considerable number of new cases of labyrinthine affection resulting from

¹ *A Practical Treatise on the Diseases of the Ear, including the Anatomy of the Organ.* By D. B. ST. J. ROOSA, M. A., M. D. Fourth edition. Wm. Wood & Co. 1878. 8vo, pp. 560.

cerebro-spinal meningitis, basilar meningitis, scarlet fever, mumps, and measles are given. In the mysterious affections of the labyrinth which occur suddenly in mumps it is suggested that a metastatic inflammation of the membranous labyrinth has taken place.

We have thus called attention briefly to the changes in this new edition; the subjects are judiciously chosen, and as conclusively treated as our present knowledge will justify. Whether some of the other parts of the book might not have been somewhat revised, especially in pathology and therapeutics, may perhaps be a question, but the whole work will continue to be a valuable guide to the practitioner from its clear yet moderate tone, and its distinctively clinical character.

THE WHITMAN POISONING CASE.

A WOMAN causes some arsenic to be bought, to destroy some troublesome water-bugs, and what are the consequences to herself and to society at large in the Charlestown district of our well-regulated city? The woman herself loses her life; the newspapers are filled for several days with details of a horrible and most unnatural crime; an innocent young girl of sixteen and a practicing physician of previous good repute are arrested and brought up for examination before the court, the one charged with murdering her own mother, with whom she had been upon the best of terms, and the other his patient, for the easier gratification of a guilty passion; the body of the unfortunate victim is exhumed after a decent burial in a distant State, and the result of it all was what? Simply that we learned what was stated, and might have been generally known and accepted from the first, namely, that a woman procured some poison to destroy some water-bugs, and paid the penalty of carelessness in its use with her life. To arrive at this conclusion, however, in this instance, it was somehow or other found necessary to smirch the good name of a pure young girl; to arraign her for a crime which we commonly associate with the characters of the most accomplished and abandoned villains of the worst historical periods; to accuse a young homœopathic physician of the blackest and foulest betrayal of trust of which a professional man could possibly be guilty; to upturn the dead as well as the living; and to subject the State as well as individuals to very considerable and uncalled-for expense. This is doing pretty well for the quiet Charlestown district, where it is evident there are individuals whose leisure and talents might find a profitable outlet in preparing cheap literature. As for the officers of the law, it is not probable that they will soon or easily allow themselves to be drawn into quite so undesirable a position again.

From the medical side, at least, there are some points in this wretched business which deserve and will repay consideration. The medical examiner was summoned to view the body, and having done so and inquired into the circumstances of the case he concluded very judiciously that he had to deal with a case of accidental poisoning, and very properly, though with a knowledge of subsequent events perhaps unfortunately, that no further interference on his part was necessary. So far all was as it should be. At this point, however, there

step upon the scene some of those kind neighbors who have more time for the affairs of others than for their own, and prevail upon a physician hitherto unconnected with the case to perform an autopsy, apparently with the idea that as it was for the interest of the old coroner to hold as many inquests as possible, so it is for that of the new salaried medical examiner to avoid elaborate investigations. Arsenic was found in the stomach; this, however, did not alter the complexion of the case, and it might have been safely predicted that arsenic would be found in some of the abdominal organs before the autopsy was made. However, the case was now brought before the government in such a way that its legal representative thought himself called upon to prosecute it, and the medical examiner, whose office and functions had been practically usurped by others, was forced in self-defense to repair to the distant place of burial and procure the brain for corroboration of the results of the unofficial autopsy. From this stage the case passed through the necessary legal forms to the discharge of both prisoners, and the thorough vindication of the conduct of the medical examiner.

It is in just such a case as this that the functions of the medical examiner under the new law require the exercise of tact and judgment. Under the law inquiry is to be made into the cause and manner of death: the cause may be ascertained by the view and further examination, if necessary, of the body; the manner, in such a case as this, only by a careful consideration of surrounding circumstances, and upon this an important part of the examiner's report must be based. The body may only show that violence was committed, and the surrounding circumstances just as clearly that it was not by another, and that there was accident, and not suicidal intent. The medical examiner must at times judge facts, for it is as much his duty to spare society the unnecessary scandal and expense so plentifully provided by the old coroners as to furnish data for the detection of crime. Why should we have a salaried officer selected with great care if the friends and neighbors are to perform his functions?

A report made without a view is always open to suspicion; one based upon a view and upon a knowledge of all the correlative facts should be accepted at its face value. If, in the present instance, the medical examiner, discrediting the statements made to him upon which he established a theory of accidental poisoning, had at once put the inquest machinery in motion, with all the attendant expenses of chemical analysis and other incidentals, and had thus initiated proceedings whose issue we now have through another course of action, his personal reputation for sagacity would justly have suffered, and the law under which he acted would have been subjected to unfavorable comment.

There are two other points suggested by the case: first, the importance of extreme care in all the details of an autopsy where medico-legal questions may be involved, for a reminder in regard to which we recommend a perusal of the paper read by Professor Wood before the Massachusetts Medical Society at its last meeting, and published in the *JOURNAL* August 1st; secondly, the value of the brain as furnishing the most unexceptional evidence in precisely these cases of arsenic poisoning.

We have abstained from any comments upon the purely clinical aspects of the case, but we must in justice confess that a practitioner who administers

"arsenicum" in arsenic poisoning has fairly earned the title of homœopath, and no one will be disposed to deny him either the courage or indifference of his convictions.

MEDICAL NOTES.

—In the JOURNAL for October 17th, page 510, we gave extracts from a Vienna letter to the *Chicago Medical Journal and Examiner* in reference to operations by Dr. Marion Sims while in Vienna. The first paragraph was as follows:—

"Dr. Sims's patients operated upon here all died of peritonitis within ten days of the operation. I remarked to the professor who related the facts to me that I supposed they selected desperate cases for Dr. Sims to operate upon. He replied that although the cases were bad ones that did not alter the fact that they had died of the direct effects of the operation."

By an inadvertence which, as will be seen, was rendered excusable by the obscure tenor of the first sentence, it was made to appear that this statement referred to every one of Dr. Sims's operations in Vienna. This was so far from being the case that Dr. Sims won large renown by his gynecological surgery in that city. The paragraph, which we repeat, related strictly to *three bad cases of cancer of the uterus*, to which reference is made in the following paragraph, and which, in the letter, preceded the one we quote above:—

"Dr. Marion Sims spent some time in Vienna during the past winter, the object of his visit being, as I am informed, to collect material for a new forthcoming edition of his work on Uterine Surgery. While here the doctor was of course considerably lionized, and invited to perform gynecological operations. Among these he did three for the removal of cancerous portions of the womb, by a method called by the Germans '*Trichterförmich Excision*,' which consists in cutting away with the scissors a funnel-shaped portion of the cervix uteri, extending, when necessary for the removal of the diseased tissue, into the body of the womb itself."

It need not be said that this paragraph should have been used in our original quotation from the letter, and we refer to the matter again because our attention has been called to a communication from Dr. Barker in the *New York Medical Record*, in which this apparent injustice to Dr. Sims is condemned.

—Virchow asked for the head of Hödel, the assassin, and was refused for moral reasons. The *Medical Times and Gazette* in commenting upon this matter, as well as upon an English decision which refuses to allow casts to be taken of criminals' heads, says: "We are fast drifting into a sentimental cycle in which a false humanity plays too important a part."

—According to the *London Medical Times and Gazette*, October 12th, page 441, "all *patent medicines* are absolutely prohibited from entry into France," which it considers "a great hardship" on English visitors, adding, characteristically, "We are no great friends to patent medicines, but, supplying as they do a natural craving for nastiness among the British public, and as the taking them forms a pleasant leisure-hour pastime for middle-aged females, we do not

see why they should be excluded." "Craving for nastiness" seems a very happy expression.

NEW YORK.

— At the late annual meeting of the County Medical Society there was an unusually large attendance, and a very exciting contest. The election for the principal officers resulted as follows: president, Dr. Freeman J. Bumstead; vice-president, Dr. Alfred E. M. Purdy; recording secretary, Dr. Frederick A. Castle; corresponding secretary, Dr. Wesley M. Carpenter; treasurer, Dr. Horace P. Farnham.

— It is not often that property goes a-begging in a place like New York, but a building has actually been discovered in a quite populous portion of the city to which nobody seems to lay claim. Dr. W. De Forest Day, the sanitary superintendent, recently made an inspection of a large tenement house in East Forty-Sixth Street, about which a number of complaints had from time to time been received by the Board of Health, and discovered a most extraordinary state of affairs. The premises were in a dilapidated and wretchedly filthy condition, the walls and ceilings being broken and out of repair generally, and the stairways in a dangerously insecure condition. The building, he found, was without a known owner, and the tenants who occupied it had paid no rent for upwards of a year and a half. All the portable wood-work about the place had been either carried off or used for fire-wood by the occupants, and the doors having thus all disappeared the house was always open. Consequently a colony of tramps and "bummers" had taken possession of the premises, and were accustomed to make night hideous with their orgies; and as it was also a resort for thieves and loose characters of all descriptions, the place was a constant source of annoyance to the police. At the first subsequent meeting of the Board of Health Dr. Day recommended the summary vacation of the house, on the ground of its being in its present condition unfit for human habitation. It is certainly remarkable that such a vile den should have been allowed to remain undisturbed for so long a time.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. CHEEVER.

[REPORTED BY E. O. OTIS, HOUSE SURGEON.]

CASE I. *Tracheotomy in an Adult, without Ether.* — S. C., a large, stout girl of eighteen, entered the hospital on the medical side, February 6th, in the service of Dr. Curtis. She had well-marked symptoms of diphtheria, the throat being swollen outside, and inside there was a dirty white membrane. On entrance she had difficulty in breathing, which rapidly increased in intensity, so that in order to breathe she was obliged to sit up in bed all the first night.

At midnight of the following day she seemed in such agony and so nearly asphyxiated that tracheotomy was decided upon as a *dernier ressort*. She was brought to the accident room, where good light could be obtained, and the administration of ether attempted. It was at once seen that this was futile, for

the poor girl, already nearly asphyxiated, could not breathe at all when the ether sponge was applied, and no effort could keep her from sitting up, in her terrible struggle for breath. So tracheotomy was done in this position, and without ether. Her neck — large and fleshy — was also swollen, which much increased the difficulty of this operation. An incision was made in the usual place, followed by a smart hæmorrhage of almost black blood. At this juncture the strugglings were so violent that a sponge was held to the wound, and the next steps suspended until she became quiet again. After some time the trachea was hooked up with tenacula, and with much difficulty an incision made in it. All these steps were rendered very slow and tedious by the abundant hæmorrhage and constant struggling of the patient. At times her face would become convulsed and cyanotic, and she seemed to stop breathing entirely. At last a dilator was inserted and held there, establishing respiration through the trachea. On account of the constant writhings of the patient, the depth of the trachea below the surface, and the looseness of the muscles and tissues from the posture, it was a long while before a tube could be inserted, and several times the patient apparently stopped breathing, and seemed to be in *articulo mortis*.

All this time the struggles and sufferings of the patient were indeed pitiful to see, great drops of perspiration standing on her face, and her eyes rolling about, mutely imploring relief. A large-sized trachea tube with a broad curve was now put in, after which the patient seemed much relieved, and, though restless, breathed easily the rest of the night. The next morning her pulse was 146, temperature 103.5° F., and respiration 36. The second day, however, she died from exhaustion, and without dyspnoea.

This case is interesting as showing the extreme difficulty of doing tracheotomy in an adult under such adverse circumstances, namely, without ether and in a sitting posture, which obliterated the landmarks for the operation. Yet in this case it seemed the part of humanity at least to attempt it.

CASE II. *Compression of the Brain; Death.* — Bridget F. was found lying on the table of the accident room one afternoon, unconscious, breathing stertorously, with lips puffing out at each respiration.

The whole history of the case was the very indefinite report that a day or two previous to her entrance she was injured in a drunken brawl, and had remained in this condition ever since. Whether she was struck, or fell down, or on what part of the body any special injury had been inflicted, no one could tell.

Her pupils responded to light, and were equal in size; she could not protrude her tongue. There were no fractures anywhere, and only a slight contusion, a scratch under the right eye, and numerous discolorations on both shins. There were slight voluntary movements, as partially raising the eyelids, and slight movements of the head. No signs of any injury to the head whatsoever could be detected. She was sent to the ward, and expectant treatment pursued. At the time of entrance her pulse was 93, and temperature 98.4° F.

At the visit the next morning she roused herself sufficiently to nod her head in reply to questions, but did not speak. She also protruded her tongue,

which was covered with a thick white coat. She also located pain in her forehead.

At noon of the same day she developed convulsions of a clonic character, which continued to increase in frequency, with only occasional intervals of a few minutes' duration, until her death.

The general character of the convulsions was as follows: the mouth would begin to quiver, the lower jaw to move; the left side of the face would be drawn down, the mouth being strongly deflected to the left. The convulsive movements would then spread over the whole body. Eyes staring, and pupils widely dilated. Intensely strong and rapid action of the heart. After a convulsion the patient would sink into her previous lethargic condition. The temperature rose to 104° F., and remained at about that point or higher. Every convulsion began on the left side, which was a significant fact.

As no history of any importance had been obtained, we were at a loss to know the cause of the convulsions, — whether they were caused by a blow on the head, uræmia, epilepsy, possibly hysteria, or some offending mass in the vagina, as happened in a case in the hospital. The urine was drawn and examined, and a quarter of one per cent. of albumen found, but no casts. Nothing was found on vaginal examination. An enema was given to make sure that the rectum was empty. One sixtieth of a grain of atropia was given subcutaneously, and repeated in four hours, with no appreciable effect.

She was rapidly worn out by the convulsions, and on the second day after entrance she died.

Just before her death she passed into a semi-comatose condition, perspired very freely, with a pulse of 160, and temperature of 106° F.

As violence was supposed to have been used upon this woman, Medical Examiner Draper was notified, and he made the autopsy, with the following result: —

On turning back the scalp, a slight effusion of blood was seen at the right parietal region, evidently from a blow, though there was not the slightest discoloration or mark on the external surface over this spot. On removing the calvarium and dura mater, a large, thick clot was seen covering the whole of the right hemisphere of the brain, and about three quarters of an inch thick, greatly compressing the brain under it. The woman had without doubt received a severe blow on the right side of her head, rupturing the meningeal artery, probably causing the effusion which produced the convulsions and other symptoms.

The kidneys were also found to be granular, — an interesting fact, — presumably predisposing the woman to cerebral effusion by rendering the arteries brittle and weak. This fact of diseased kidneys might bring up an important complication in case of a trial by suggesting the question as to whether the diseased kidneys might not have been a sufficient cause for the apoplexy.

Quite curiously enough, hardly more than a week had elapsed before a case came in on Dr. Thorndike's side, whose symptoms were almost exactly like this one, and at the autopsy a large cerebral hæmorrhage was found.

This case presents the following interesting points: —

(1.) No *external* evidence of any injury to the head.

(2.) The complication of *granular* kidneys with traumatic cerebral hæmorrhage.

(3.) The question of trephining: Would the operation have been justifiable? Knowing that the convulsions always began on the left side, if done at all, it would have been done on the right side, and hence have relieved the pressure by giving exit to the effused blood and clots.

SHORT COMMUNICATIONS.

A NATIONAL BOARD OF HEALTH.

MR. EDITOR, — I rejoice to see a petition for a national board of health, although I think it would be better to wait until all the States have organized their state boards. This, however, is of minor importance, for I cannot hope, judging from the labor needed in some of our great States to get the local boards, that by one petition to Congress we shall gain our object. We shall have to repeat the petition, I fear, many times before success will be attained.

I regret, however, that the petition, as now devised, proposes wholly to omit the laity as members. This is, as I deem it, a *great misfortune*, and for the following reasons: —

(1.) Sanitary matters ought to appeal very strongly to every man and woman in the land. Every one can easily study the subject. Many sanitary measures appeal to the good sense and common intelligence of the community as much as they do to professional learning. Therefore, *we need on every sanitary board able laymen*. We certainly need a lawyer, a civil engineer, and one or more business men. These classes have been in one instance, at least, namely, our Massachusetts State Board of Health, of infinite value to the State. While deferring to the medical men on the board on all strictly professional matters, they have constantly made wise suggestions of great value to the proper working of the board.

(2.) We have had in this State, and also in England, laymen who have done an immense work for sanitary science. Need I add more than the name of Lemuel Shattuck, of Boston, — the real founder of our own board, — and those of Rawlinson and Chadwick, of England?

For these reasons I hope that the petition before being presented will make some provision for a representation of the laity upon the national board.

Yours truly,

HENRY I. BOWDITCH.

ABSTRACT OF SANITARY REPORTS RECEIVED DURING THE PAST WEEK UNDER THE NATIONAL QUARANTINE ACT. — No. XVIII.

OFFICE SURGEON-GENERAL U. S. M. H. S., WASHINGTON, November 9, 1878.

NEW ORLEANS, LA. — There were 11 new cases of yellow fever and 143 old cases reported for the week ended yesterday evening. For the past twenty-four hours no new cases and two deaths. Quarantine raised on the 5th inst. Total cases 13,406, — subject to revision. Total deaths 4010.

MORGAN CITY, LA. — There were eight cases of yellow fever and three deaths during the past week. Total cases to yesterday evening 571, deaths 105.

MOBILE, ALA. — During the week ended yesterday evening there were 35 cases of yellow fever and nine deaths. Total cases 259, deaths 68.

PASS CHRISTIAN, MISS. — Seven new cases of yellow fever and one death for the past week. Total cases 196. Total deaths 21.

OCEAN SPRINGS, MISS. — For the week ended yesterday noon there were four cases of yellow fever and no deaths. Total cases 150, deaths 30.

HERNANDO, MISS. — Ten cases of yellow fever and five deaths for the week ended November 2d. No cases and one death during the past week. Total cases 175, deaths 69.

DRY GROVE, AND LEBANON CHURCH NEIGHBORHOOD, MISS. — Since October 19th there have been 13 new cases of yellow fever and eight deaths. No new cases and but one

death for the week ended November 6th. Total cases 125, deaths 52. Crystal Springs, Miss., near Dry Grove, has so far escaped the fever.

MEMPHIS, TENN. — During the past week there were 33 deaths from yellow fever. Total deaths to the evening of the 7th, 2997.

CHATTANOOGA, TENN. — Nine new cases of yellow fever and four deaths during the past week. Total cases to yesterday evening 444, deaths 133.

CAIRO, ILL. — During the two weeks ended yesterday there were eight new cases of yellow fever and three deaths. The last case occurred on the 4th and the last death on the 6th inst. Total cases 83, not including some doubtful cases. Total deaths 44. Heavy frost the 8th inst.

VICKSBURG, MISS. — There were 11 deaths from yellow fever during the past week. No deaths during the past twenty-four hours. Six deaths during the week in the country near Vicksburg.

DELTA, LA. — Four deaths from yellow fever during the past week.

DECATUR, ALA. — During the week ended last evening there were eight cases of yellow fever and one death. Total cases 196, deaths 43.

GALLIPOLIS, OHIO. — No new cases of yellow fever since October 26th. The last death occurred October 27th. Total cases 65, deaths 37, — not including six deaths which occurred on the steamboat John Porter.

KEY WEST, FLA. — No yellow fever since October 13th. The United States troops returned to Key West on the 7th inst.

HAVANA, CUBA. — Twenty-four deaths from yellow fever, and four from small-pox for the week ended November 2d.

LAMBAYEQUE, PERU. — For the week ended October 12th sporadic cases of yellow fever are reported.

MARTINIQUE. — There were no deaths from preventable diseases in the island of Martinique during the week ended October 9th.

BERMUDA. — During the two weeks ended October 29th there were six deaths from all causes out of a population of 15,293, including 3218 military and naval force. The bark Blackpool, which left Bermuda quarantine for England October 22d, had three or four cases of yellow fever on board.

JAPAN AND CHINA. — Dr. Simmons, sanitary inspector for the Japanese government for the port of Yokohama, reports under date of October 10th that he regards the occasional reported cases of cholera in Japan during the past summer as cholera morbus, and not malignant or Asiatic cholera. On the 2d of October, however, malignant cholera broke out in Nagasaki, and in eight days there had been 58 cases and 10 deaths. Cholera has existed in Shanghai, China, for several months, and as Nagasaki is the first port of Japan entered by vessels from Shanghai, Dr. Simmons regards the outbreak as a new importation, but owing to the lateness of the season and the sanitary measures instituted by the government he does not anticipate a spread of the disease.

EUROPE. — In one hundred and forty-nine cities and towns of the German empire, having an aggregate population of 7,369,009, there were during the week ended October 12th 5470 births, and 3539 deaths from all causes, being an annual death-rate of 25 in 1000 of the population. Wiesbaden shows the lowest death-rate, 11.2, and Chemnitz the highest, 33.8. The total deaths include 80 from enteric fever, 127 from scarlet fever, and 154 from diphtheria. No deaths occurred from cholera, yellow fever, small-pox, or typhus fever.

VIENNA, AUSTRIA. — During the two weeks ended October 19th 700 deaths are reported out of a population of 727,271, being an annual death-rate of 25.53 per 1000 of the population. The total deaths include 15 from small-pox, five from enteric fever, 11 from scarlet fever, and 46 from diphtheria.

HAMBURG. — During the week ended October 12th there were 53 deaths from typhus fever, 10 from scarlet fever, and 39 from diphtheria and croup.

GREAT BRITAIN. — In twenty-three large cities and towns of the United Kingdom, having an aggregate population of 8,373,953, there were 6095 births during the week ended October 19th, and 3371 deaths from all causes. In twenty-one of these cities there were 14 deaths from small-pox, 184 from scarlet fever, 22 from diphtheria, and 90 from fevers, principally enteric.

JOHN M. WOODWORTH,

Surgeon-General U. S. Marine Hospital Service.

COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending Nov. 2, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean for ten Years, '68-77.
New York.	1,093,171	450	21.40	23.42	28.71
Philadelphia.	876,118	286	16.98	18.80	21.54
Brooklyn.	549,438	219	20.73	21.51	25.50
Chicago.	460,000	130	14.69	17.83	22.39
Boston.	375,476	151	20.91	20.10	24.34
Providence.	100,000	35	18.20	18.81	19.20
Lowell.	55,798			19.09	22.50
Worcester.	54,937	15	14.20	20.06	22.30
Cambridge.	53,547			18.69	20.83
Fall River.	53,207			21.35	24.96
Lynn.	35,528	21	30.74	20.42	19.67
Springfield.	33,981	11	16.84	16.02	19.77
Salem.	27,140	3	5.75	20.38	21.15

AMERICAN PUBLIC HEALTH ASSOCIATION. — Gentlemen who expect to attend the meeting at Richmond, Va., next week, can obtain tickets at half price by informing Dr. C. F. Folsom, Secretary of the State Board of Health, State House.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — The next regular meeting of the society will be held at 36 Temple Place on Monday evening, November 18th. Dr. Vogel will read a paper entitled *An Unfortunate Case*.

BOOKS AND PAMPHLETS RECEIVED. — *Case of Poisoning by Oil of Chenopodium*. By Thomas R. Brown, M. D. (Reprint from the Maryland Medical Journal for November, 1878.)

Transactions of the Pathological Society of Philadelphia. Volume VII. Philadelphia: J. B. Lippincott & Co. 1878. (From A. Williams & Co.)

Transactions of the Medical Society of New Jersey. 1878.

Human Osteology. By Luther Holden, F. R. C. S. Fifth Edition. With numerous illustrations. Philadelphia: Lindsay and Blakiston. 1878.

Questions on Anatomy, Histology, and Physiology for the Use of Students. By C. L. Ford, M. D. Ann Arbor. 1878.

Habitual Drunkenness and Insane Drunkards. By Dr. Bucknill, F. R. S. London: Macmillan & Co. 1878.

Der Alcoholismus, seine Verbreitung und seine Wirkung, etc. Von Dr. A. Baer, Königlichem Sanitäts-Rath und Oberarzt, etc. Berlin. 1878. Aug. Hirschwald. (Received from Dr. H. I. Bowditch, Chairman of the State Board of Health.)

Notes on the Treatment of Skin Diseases. By Robert Livring, A. M., M. B. Cantab. Fourth Edition, revised and enlarged. New York: William Wood & Co. 1878. (From A. Williams & Co.)

Diseases of the Bladder and Urethra in Women. By Alexander J. C. Skene, M. D. New York: William Wood & Co. 1878. (From A. Williams & Co.)

The Eighth Annual Report of the Board of Directors of the Free Dispensing Association of Buffalo. October, 1878.

Accidental Hæmorrhage. (Buffalo Medical Association.) By F. W. Bartlett, M. D. 1878.

The Eradication of Syphilis and Crime by the Extirpation, in that Class, of the Procreative Power. A paper read before the Maine Medical Association June 11, 1878. By George F. French, M. D., of Portland. 1878.